



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIAL
CERTIFICATE NUMBER USA/0165/S, REVISION 5**

400 Seventh Street, S.W.
Washington, D.C. 20590

This certifies that the sources described have demonstrated their ability meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and United States of America² for the transport of radioactive materials.

1. Source Identification - Amersham Corporation Model Nos. A424-2 through A424-19 (excluding A424-6 through A424-9) and A453-1 through A453-10 (excluding A453-3 and A453-4).
2. Source Description - The sources authorized by this certificate are single or double encapsulations constructed of Type 304 or 304L stainless steel in accordance with Technical Operations drawing no. 60060, sheets 2 and 3 (attached). The external diameter of the capsule is between 6.35 mm (0.25 inches) to 12.07 mm (0.48 inches) and the external length is between 19.81 mm (0.78 inches) and 33.32 mm (1.312 inches). Each capsule assembly is connected to a source wire and connector assembly for use in radiographic instruments.
3. Radioactive Contents - The sources described in this certificate contain not more than the following listed values of Cobalt 60 in solid metal form.

<u>Model</u>	<u>Capsule Style</u>	<u>Activity (TBq/Ci)</u>
A424-2	60011, 60001	0.81/22
A424-3	60011, 60001	0.81/22
A424-4	60011, 60000	2.04/55
A424-5	60011, 60001	0.22/6
A424-10	60011, 60004	0.22/6
A424-11	60011, 60004	2.04/55
A424-12	60011, 60004	4.07/110
A424-13	60012, 60002	12.22/330
A424-14	60011, 60004	4.07/110
A424-15	60011, 60004	0.41/11
A424-16	60011, 60000	2.04/55
A424-17	60011, 60000	2.04/55
A424-18	60011, 60000	1.22/33
A424-19	60001, 60004	0.004/0.11

¹ "Safety Series No. 6, Regulations for the Safe Transport of Radioactive Materials, 1985 Edition (as amended in 1990)", published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

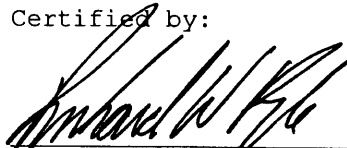
CERTIFICATE USA/0165/S, REVISION 5

<u>Model</u>	<u>Capsule Style</u>	<u>Activity (Tbq/Ci)</u>
A453-1	60011, 60000	4.07/110
A453-2	60012, 60002	6.11/165
A453-5	60012, 60002	20.37/550
A453-6	60013, 60003	40.74/1100
A453-7	60011, 60000	4.07/110
A453-8	60011, 60000	2.04/55
A453-9	60011, 60000	2.04/55
A453-10	60011, 60000	2.04/55

4. Quality Assurance - Records of Quality Assurance activities required by paragraph 209 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on January 1, 2006.

This certificate is issued in accordance with paragraph 703 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the December 22, 2000 petition by AEA Technology, Burlington, MA and in consideration of other information on file in this Office.

Certified by:


Robert A. McGuire

for Associate Administrator for Hazardous Materials Safety

JAN 10 2001

(DATE)

Revision 5 - Issued to extend the expiration date.

A60060

REV.

DATE

DESCRIPTION

INNER CAPSULE:

A60011-1
A60011-2
A60011-3
A60011-4
A60011-5 $\frac{.250}{.249}$ DIAOUTER CAPSULE
A60011-6OUTER PLUG
A60011-6.956
60011

INNER CAPSULE:

A60012-1
A60012-2
A60012-3 $\frac{.350}{.349}$ DIAOUTER CAPSULE
A60012-4OUTER PLUG
A60012-41.279
60012INNER CAPSULE
B60013-5 $\frac{.476}{.475}$ DIAOUTER CAPSULE
B60013-3OUTER PLUG
B60013-41.588
60013

MATERIALS

FINISH

DRAWN BY

UNLESS OTHERWISE
SPECIFIED TOLERANCES ARE

.X ±

CHECKED BY

.XX ±

.XXX ±

APPROVED BY

ANGLES ±

FRACTIONS ±

TECHNICAL OPERATIONS INC.
RADIATION PRODUCTS DIVISION
BURLINGTON, MA 01803

DWG TITLE

60
COBALT SOURCE REFERENCE
(DOUBLE ENCAPSULATION)

CLASSIFICATION

SIZE

DWG. NO.

A

60060

REV.

SCALE 2:1

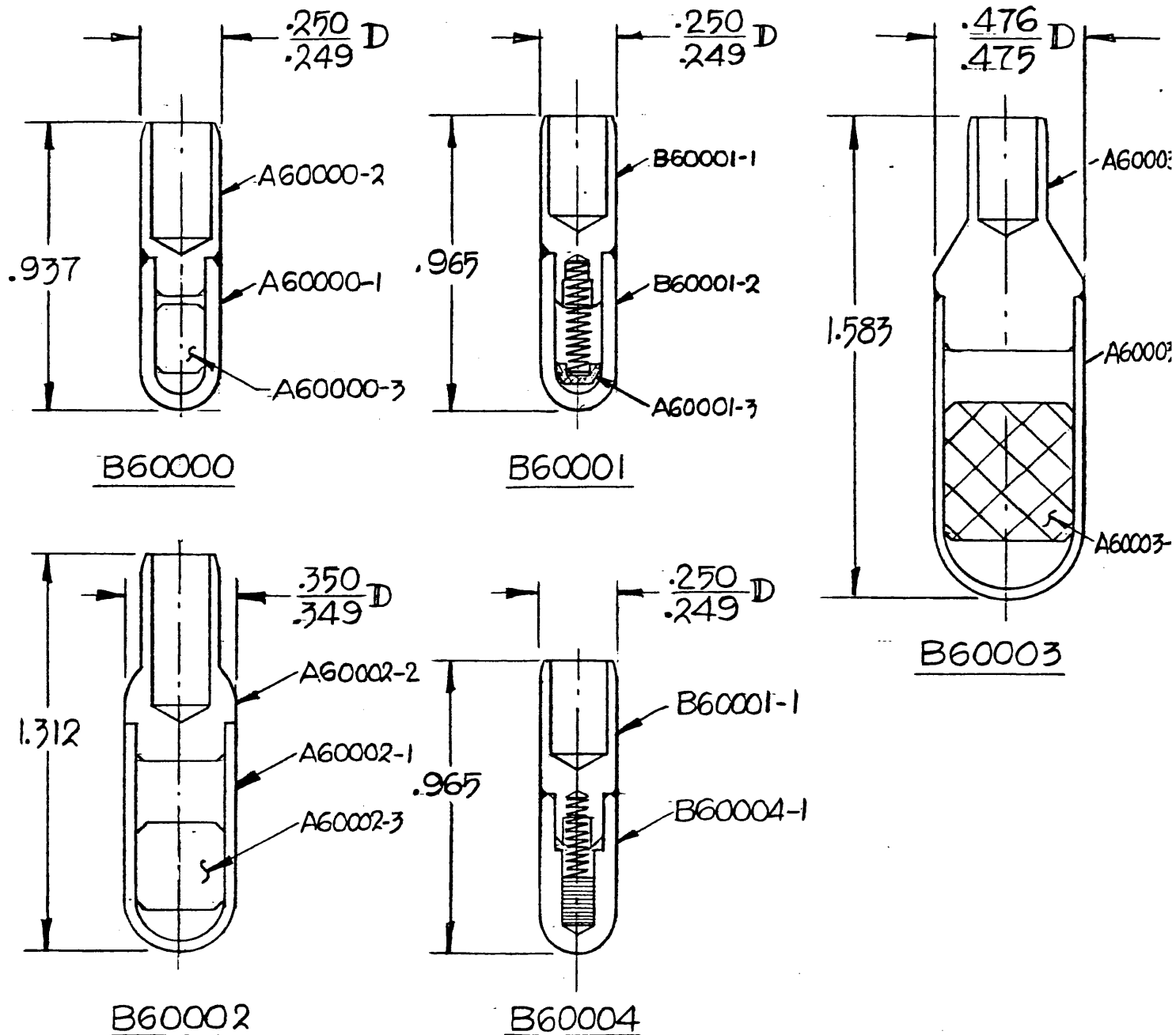
SHEET 2 OF 3

A60060

REV.

DATE

DESCRIPTION



MATERIALS



TECHNICAL OPERATIONS INC.
RADIATION PRODUCTS DIVISION
BURLINGTON, MA 01803

FINISH

DWG TITLE

COBALT ⁶⁰ SOURCE REFERENCE
(SINGLE ENCAPSULATION)

DRAWN BY

UNLESS OTHERWISE
SPECIFIED TOLERANCES ARE

.X ±

CHECKED BY

.XX ±

.XXX ±

APPROVED BY

ANGLES ±

FRACTIONS ±

CLASSIFICATION

SIZE

DWG. NO.

A

60060

SCALE 2:1

SHEET 3 OF 3